

DEPARTMENT OF BUILDING AND DEVELOPMENT

COUNTY OF LOUDOUN

MEMORANDUM

DATE: April 16, 2009

TO: Val Thomas, Zoning Planner

FROM: Todd Taylor, Environmental Engineer

THROUGH: Gary Clare, Chief Engineer
William Marsh, Environmental Review Team Leader

CC: Kelly Williams, Department of Planning, Community Planner
Dan Csizmar, Office of Capital Construction

**SUBJECT: ZMAP-2006-0011 & ZCPA-2006-0003
Stone Ridge Commercial - REVISED**



The Environmental Review Team (ERT) reviewed the subject application during the April 6, 2009, ERT Meeting. A site visit was also conducted on April 9, 2009. Our comments pertaining to the current application are as follows:

Regarding forest resources, steep slopes, and floodplain

1. The proposed Public Use Site is limited in size at 3.4 acres, located in close proximity to the floodplain and steep slopes, predominantly covered with healthy deciduous trees, and has an existing stream system located in the rear of the property. These conditions do not present an ideal development site in relationship to protecting the County's green infrastructure. Staff recommends that the applicant consider another site for public use that would have less environmental impacts. Attachments A and B provide an aerial photograph with environmental overlays and supporting site photographs, respectively. Attachment A includes the approximate alignment of proposed Millstream Drive and the approximate boundaries of the public use site. [Revised General Plan (RGP) Forest, Trees, and Vegetation Policy 1; RGP River and Stream Corridor Resources Policies 11 and 23; and Revised 1993 Loudoun County Zoning Ordinance (Revised 1993 LCZO) Section 6-1211(E)(9)]
2. Staff recommends shifting the proposed alignment of Millstream Drive farther east to minimize impacts to moderately steep slopes. In addition, staff recommends committing to measures that will be used to protect the steep slopes areas and adjacent floodplain and stream during construction activities. Example measures include super silt fence, stabilization matting, and development phasing to avoid

extensive areas of disturbance for extended periods of time. [RGP Steep Slope and Moderately Steep Slope Policy 3 and Revised 1993 LCZO Section 5-1508 and Section 6-1211(E)(6)]

3. The application proposes to alter the alignment of South Point Drive (formerly Canary Grass Drive). During previous site visits as well as the April 9, 2009 site visit, staff identified several healthy mature white oak trees located north of the proposed road alignment, adjacent to a cleared area. Staff recommends that the existing vegetation in this area be identified as a tree conservation area on sheets 5 and 11. The tree conservation area should include a suitable width to avoid impacting the critical root zone (CRZ) of the oak trees. Maintaining tree cover in this area will help to offset loss tree cover in other areas caused by this application. [RGP Forest, Trees, and Vegetation Policy 1 and Revised 1993 LCZO Section 6-1211(E)(9)]
4. Staff recommends including a commitment that establishes the intent and limitations within tree conservation areas, similar to what has been provided with previous Stone Ridge rezoning and concept plan amendment applications [RGP Forest, Trees, and Vegetation Policy 1 and Revised 1993 LCZO Section 6-1211(E)(9)]
5. Staff recommends depicting the current Loudoun County Geographic Information System (LOGIS) floodplain, forest cover, and steep slope layers on sheets 4-13. The current depictions are inconsistent with County mapping. [ZCPA Checklist Items J.3, J.5, J.6, and L.2]

Regarding wetlands

6. Staff emphasizes the importance of mitigating wetland and stream impacts close to the impact area to help maintain water quality and flood protection functions, as well as habitat. As such, for any necessary mitigation, staff recommends that the applicant commit to prioritizing mitigation as follows: 1) onsite, 2) within the Broad Run Watershed within the same Planning Policy Area, 3) within the Broad Run Watershed outside the Planning Policy Area, and 4) Loudoun County, subject to approval by the U.S. Army Corps of Engineers (Corps) and the Virginia Department of Environmental Quality (DEQ). This approach is consistent with Policy 23 on Page 5-11 of the RGP which states that "the County will support the federal goal of no net loss to wetlands in the County." Furthermore, the County's strategy is to protect its existing green infrastructure elements and to recapture elements where possible [RGP, Page 6-8, Green Infrastructure Text].
7. The southernmost potential stormwater management (SWM)/best management practice (BMP) facility in Land Bay 1 is located on-line with a jurisdictional stream, which is problematic. On-line SWM/BMP facilities are typically not permitted by the Corps and DEQ. Staff recommends relocating the facility. [RGP River and Stream Corridor Resources Policies 11 and 23]

Regarding water quality

8. Staff recommends several measures for the existing pond south of Millstream Drive, in order to minimize future maintenance expense, improve its water quality benefit, and enhance its visual appeal [RGP Surface Water Policy 5 and Revised 1993 LCZO Section 6-1211(E)(9)]:

- The pond does not include sediment forebays. Forebays are a minimum design standard for SWM ponds that provide preventive maintenance. Therefore, staff recommends that forebays be installed at all current and future stormwater pipe outfalls.
- The existing embankment is rutted on top from frequent vehicle use, and the side slopes have not been mowed for a long time. Ruts that collect rainwater encourage seepage into the pond embankment that can compromise structural stability, while infrequent mowing encourages woody plant growth that also compromises stability. Staff encourages the applicant to promptly address proper facility maintenance.
- Staff encourages establishing a forested buffer along the side slopes of the existing pond (except for the embankment side slopes and near any new sediment forebays), consistent with Section 7.304 of the Facility Standards Manual. Viable buffers along the embankment enhance green infrastructure, provide a visual buffer between the uses on either side of the pond, and can compensate for some of the existing stream buffer that will likely be lost from inundation within the pond basin.

Regarding green building practices

9. Staff supports a built design with this application that helps to sustain the natural environment, consistent with RGP language on page 5-2. Accordingly, staff recommends that the applicant implement design measures that conserve energy and water consumption, minimize waste generated during construction, and maintain interior and exterior air quality. RGP policies supporting these design measures include policy one, page 2-20; policy two, page 2-23; policy one, page 5-5; and policy one, page 5-41.

Several design approaches are available to achieve these goals, including Leadership in Energy and Environmental Design (LEED) as administered by the United States Green Building Council; and Energy Star and Water Sense programs administered by the Environmental Protection Agency. The Board of Supervisors has endorsed LEED as the preferred green building rating system for non-residential construction through its support of the COG Regional Green Standard, available at <http://mwcog.org/environment/greenbuilding/>. Loudoun County also participates with the Energy Star program and uses the Energy Star Portfolio Manager to

benchmark energy efficiency for public facilities, along with designing public facilities to LEED silver standards. Staff recommends incorporation of these design approaches and is available to discuss design options with the applicant, thereby meeting its role as “leader and facilitator” for achieving and sustaining a built environment of high quality, as directed by RGP policy one, page 5-5.

10. Staff encourages implementation of green building standards within the residential portions of the application. The Board of Supervisors recently adopted CPAM-2007-0001, housing policy that includes Guiding Principle Policy 12: “The County encourages development that utilizes energy efficient design and construction principles, promotes high performance and sustainable buildings, and minimizes construction waste and other negative environmental impacts.” Several feasible, practicable standards exist for green neighborhood development, including but not limited to EarthCraft, LEED for Homes, and green building standards promulgated by the National Association of Home Builders.

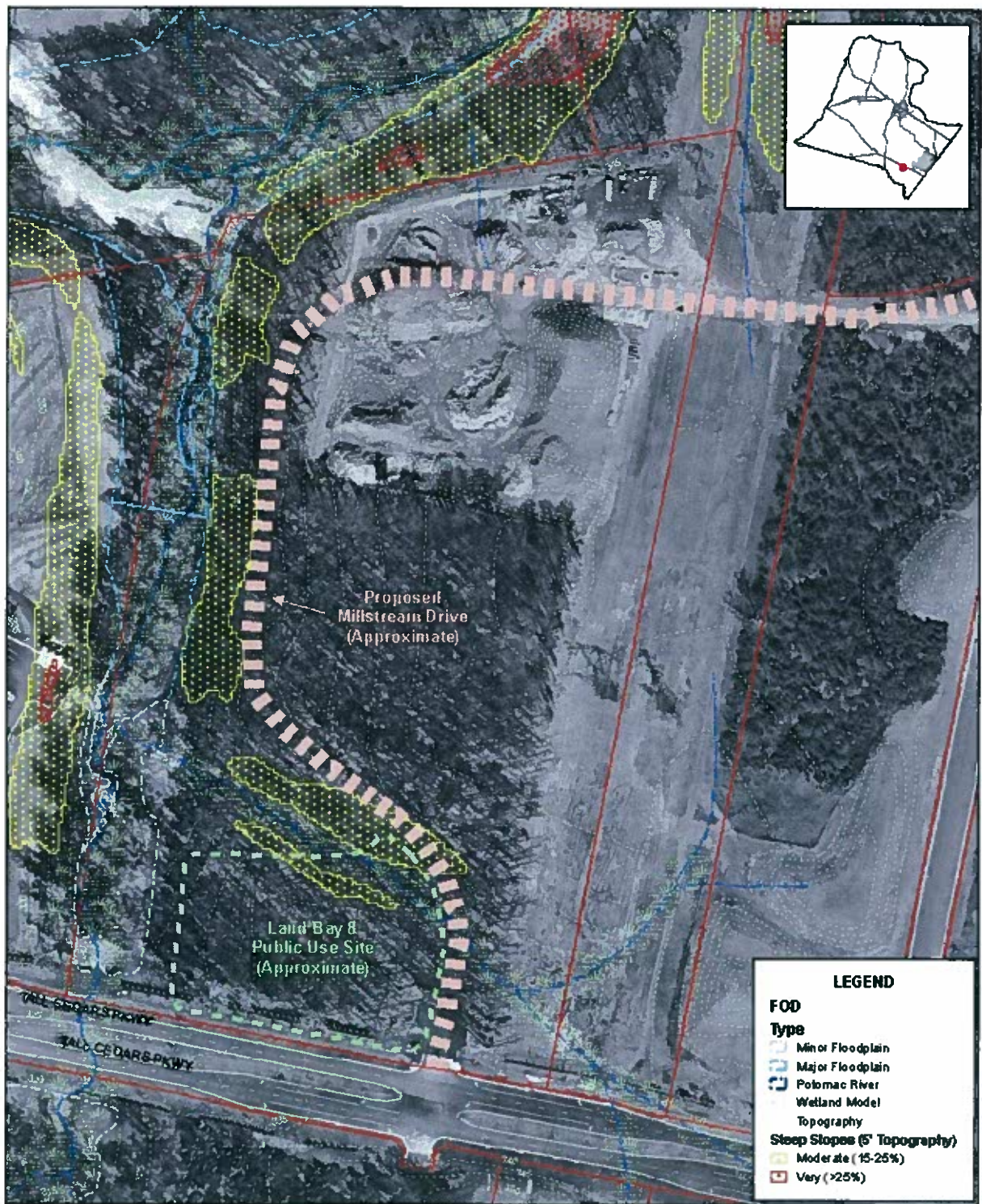
Other

11. Please add information to the “ZCPA Proposal” section of the Statement of Justification explaining the proposal in regards to Land Bay 1. Staff notes that the depiction of open space and tree conservation areas have changed between the current CDP proposal and the approved CDP associated with ZMAP-2002-0013 and ZCPA-2002-0004. Particularly, the current proposal includes the elimination of open space corresponding to the southern portion of the tributary that parallels Northstar Boulevard. As shown on sheets 10 and 12 (Illustrative Plan and Land Use Map), the current proposal allows for a road and lots to impact the stream in this area, which runs counter to River and Stream Corridor Resources Policies 11 and 23 of the RGP. Staff recommends that the tributary be included as open space, as previously approved, and identified as a tree conservation area to ensure its protection. [ZCPA Checklist Item K and RGP River and Stream Corridor Resources Policies 11 and 23]
12. Proposed Proffer VI.E requires the applicant, during the subdivision review process, to engage an acoustical engineer to address compliance with the RGP’s highway noise policies with respect to any residential lot located closer the 175 feet from Northstar Boulevard or Tall Cedars Parkway. Since the area of impact is unknown, staff recommends removing the “175 feet” threshold. Staff further recommends that the proffer commit to a noise study to be submitted to the County for review and that the study is based on the most recent, applicable forecasted traffic volumes available from the Office of Transportation Services and the ultimate design speed of the specified roadways. Lastly, staff recommends that the timing be changed to construction plan or site plan to allow the noise analysis to be based on final topography. [RGP Highway Noise Policies and Revised Countywide Transportation Plan Noise Policies]

Please contact me if you need any additional information.

ATTACHMENT A

STONERIDGE COMMERCIAL - PROPOSED MILLSTREAM DRIVE / PUBLIC USE SITE



Map Prepared By the Department of Building and Development (4/10/09)
2008 black and white imagery by VARGIS
Data from Office of Mapping and Geographic Information

ATTACHMENT B



Looking northwest at Public Use Site



Stream in northeastern corner of the Public Use Site